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ABSTRACT

A model depicting dropping out of high school as a process is presented. Against a longitudinal mapping of student experiences, questions about standards or exit tests are addressed. Existing research on dropouts provided the empirical basis for the model. The central features of the model are the academic and social systems of the school. Individual student characteristics also enter the model and reinforce its longitudinal character. Existing research provides data on student characteristics common to dropouts, in-school performance and behaviors prior to leaving, attitudes about school and leave, and a limited range of out-of-school activities. These findings are integrated into the model. Based on the application of the model, it appears that: (1) dropping out is the result of a lengthy process; (2) minimum competency graduation tests may play a pivotal role; (3) some such tests are notorious for failing a disproportionate number of minority students; (4) the attitude of school staff toward low achieving students is also crucial; and (5) research statistics on minimum competency tests is spotty. One flowchart and two tables are appended. (TJH)

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Dropping Out of School as a Process: Implications for Assessing the Effects of Competency Tests Required for Graduation

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Dropping Out of School as a Process: Implications for Assessing the Effects Of Competency Tests Required for Graduation

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Center for Student Testing, Evaluation, and Standards

Working Draft - For Comments Only

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Introduction

A suspected but unexamined result of more rigorous standards for the high school diploma is their discouraging effect on school completion. About a fourth of our youngsters leave school without diplomas, and the warning that recently legislated academic orientations may swell the ranks of dropouts has sounded repeatedly over the past three years (Hamilton, 1986; McDill, Natriello, & Pallas, 1986; Business Advisory Commission of the Education Commission of the States, 1985; Howe, 1984; Edson, 1984).

A policy direction that preceeded and is now joined by our push for standards in the high school is the institution of competency tests that must be passed before diplomas are awarded (Labaree, 1984). At least half of the 50 states have such a requirement. Since added courses, beefed-up curricula, and mandatory tests for graduation are now operational in many schools and state systems, the next few years will undoubtedly witness attempts to gauge the true nature of these changes and their consequences for pupil persistence and achievement.

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No systematic evaluations of the effects of graduation tests on school completion have been recorded. An element of the Center's Impact Program is just such a study. This paper, and a companion piece to follow, provide critical background for this work. Informed research must acknowledge what we know about dropping out, a task we take up here; studies must also proceed from what we know about the nature of the tests themselves and the ways they have been implementated in the schools, a forthcoming paper under this project.

Just where and how might the imposition of competency measures bear on the commitments of pupils to finish high school? We suggest below that dropping out should be viewed as a process, and it is against a longitudinal mapping of pupil experiences that questions about standards or exit tests should be framed. Existing research on dropouts suggests such a map for us, but it must be pieced together from multiple sources of evidence. Interestingly, more detailed models of student attrition appear in research on those who leave post-secondary institutions than in analyses of school dropouts. We extract from this tradition to sketch a working model applicable to school dropout behavior. We then examine accumulated evidence on dropping out in in light of this tentative process structure. Finally, we suggest the implications of existing evidence on dropping out of school for empirical studies of the effects of instituting tests for high school graduation.

A Process Model of School Leaving

Research on attrition from colleges provides a useful framework for organizing our knowledge about dropping out of school. Explicit models of student leaving at this level have followed a rich developmental course over the past twenty years, at least in comparison to studies which attend to secondary school leavers. As elaborated below, research on school dropouts tends instead to be atheoretical and to have concentrated on bivariate links between dropping out and a host of individual and school factors. Many researchers express an awareness that important processes are at play over the lives of those who eventually drop out, but this recognition has not led widely to the creation and estimation of longitudinal models (Steinberg, Blinde, & Chan, 1984; Natriello, Pallas, & McDill, 1986; a notable exception appears in Eckstrom, Goertz, Pollack, & Rock, 1986, which is discussed below).

The conceptual balance favoring higher education attrition research is worth a brief comment. Movement of students into and out of higher education is fluid, and the financial health of many colleges is linked very tightly to their ability to retain students (Kemerer, Baldridge, & Green, n.d.). Half or more freshmen leave some colleges during their first year. Thus institutional self interest alone has probably underwritten a sizeable body of this research through both direct funding and contributed cooperation. In contrast, school systems exhibit a great deal of ambivalence when it comes to understanding or treating issues of dropouts (Fine, 1986; Catterall, 1986a).

Many districts and states do not even generate reports on school leaving and cannot cite their dropout rates (Catterall, 1986b; Hammack, 1986). One acknowledged reason for this is the expensive nature of dropout identification and tracking and the unwillingness of schools to allocate resources to these ends. Another is that schools face many challenges in their mission to serve all children and can find the departure of slow learning or rebellious youngsters an advantage in tending to those who remain (Wehlage & Rutter, 1986; Fine, 1986).

Their impetus aside, a family of instructive models related to college attrition developed by Spady (1970), Tinto (1975), and Bean & Metzner (1985) is useful for us. These authors build on each other's work and trace the origins of their models to Durkheim's (1961) classic conception of the conditions under which individuals reject society through suicide. Their models focus on the central construct of <u>institutional integration</u> and its influences on maintaining affiliation the colleges in question.

According to Durkheim, the individual may break his ties to a social system when he fails to integrate himself to the common life of that society. Two types of integration are critical -- normative congruence and collective affiliation. Normative congruence refers to the compatibility of an individual's attitudes, interests, and personality with the attributes and influences of his environment. Collective affiliation refers to supports provided by one's friends and associates. Failures to achieve either or both sorts of integration appear to underlie

specific suicidal expressions in Durkheim's model.

Of course, suicide is more final than leaving school, but the analogy has proved rather satisfying to college attrition researchers. In the translation of the model, the college is portrayed as two major sub-systems, the academic system and the social system. Research suggests that failure of the individual to integrate with either or both of these sub-systems can lead to withdrawal or expulsion from college. Lack of congruence with a school's academic norms can lead to failure. Lack of congruence with a college's social norms can lead to expulsion or separation. Excessive social integration at the expense of academic integration may lead to flunking out. Academic values exceeding institutional expectations and norms can lead to transfer to a more demanding college. And so on. (Bean & Metzner (1985) provide the most recent review of related literature.)

The authors cited incorporate the conditions of separation identified by Durkheim (integration deficiencies) into path-like models which trace the evolution of these conditions for individuals. We have constructed a model of school dropout decisions in Figure I that is based on this work and draws most directly on Tinto's (1975) design.

(Figure 1 about here)

Paralleling the tradition noted above, the central features of our model are the academic and social systems of the school. Successful interactions in these subsystems are shown to lead to

successful integration. Academic integration is indicated by grade performance and learning. Social integration is indicated by the quality of student interactions with others at school -- fellow students, teachers, and administrators. Alienation or congruence in either of these sub-systems may have implications for the other, hence the arrow drawn between them. For example, the overly social sophomore may suffer low grades. The overly bookish senior may have few friends. Or an individual may think enough of his social activities at school to tolerate the minimum academic efforts needed to get by and thus avoid harassment by teachers and school administrators.

Integration into the academic and social life of the school contributes to student commitments to the central goals and values of the school. These commitments -- academic and institutional -- occupy a position in the model reflecting this; but they also contribute in turn to academic performance and social interactions. The longitudinal or process character of the model is most apparent in this cybernetic looping. Early commitments may lead to achievement and quality human interactions; these result in academic and social integration; stronger commitments to academic goals and school behavioral norms follow in turn. And the decision of interest to us -- dropping out -- becomes unlikely. Parallel but negative chains of events can be thought to lead to flagging commitments and to dropping out.

Individual pupil characteristics also enter the model and further reinforce its longitudinal character. After all,

youngsters bring to kindergarten a distribution of endowments that associate strongly with subsequent outcomes (Sewell & Hauser, 1975; Coleman et al., 1966; Jencks et al., 1972). Family background influences are shown in Figure 1 to operate in two ways. Values for academic learning and socially acceptable modes of interaction can be initiated and reinforced by circumstances and activities at home. So family background affects commitments to academic and institutional goals in the model. An additional influence of family background, that on pupil ability, also enters the model. Pupil ability can then be considered an exogenous variable from the point of view of the school system itself and is shown to influence learning and grade performance directly.

Finally the larger social system, specifically the world of work, may influence school dropout decisions. Labor market conditions drawing youth to the workplace or keeping them out may affect commitments to school and to the diploma, and may have implications for academic and social interactions within school. The overly involved student worker may have no time for academic pursuits or extracurricular activities. Or a barren job market may keep kids in school for lack of better things to do.

The Evidence on Dropping Out of School in Light of Our Model

Research findings on school dropouts have consistent and expected qualities. They are concentrated in pupil characteristics common to school leavers, in-school performance and behaviors prior to leaving, attitudes about school and life, and a limited range of their out-of-school activities. We will

attempt to integrate systematically the major findings in these realms with our model in Figure 1.

We have also gained an appreciation of the magnitude of the dropout problem, and this provides a context for the remaining findings. Counts of diplomas awarded versus school enrollments suggest that about 75 percent of 9th graders receive high school diplomas three years later. This figure has been stable for the past 20 years after growing steadily from less than 10 percent at the turn of the century. (We must note that only 11 percent of 14 to 17 year olds were even enrolled in school as of 1900, while by 1978 the figure grew to 94 percent (Grant & Eiden, 1980, p.44). From the numbers of high school equivalency diplomas (GEDs) awarded annually we infer that about half of those who drop out eventually secure this type of certificate (National Center for Educational Statistics, 1984, p.60).

Dropout or completion figures for political and administrative jurisdictions smaller than the nation are regarded with much skepticism. State and school district attrition rates do not accommodate pupil mobility adequately, and we see many idiosyncratic approaches to estimating dropout numbers where this is attempted. Nonetheless, available figures convince us that dropping out is extremely variable across certain schools, districts, and even states. Urban districts which have studied dropping out intensively cite four-year high school dropout rates as high as 40 to 50 percent; even higher rates are reported for some schools (Los Angeles Unified School District, 1985). And although we shrink from fine-tuned interpretations of state

attrition data, combining these with Census Bureau profiles suggests that as few as 60 percent of high schoolers finish in several states in the deep south, and that more than 90 percent finish in several states in the upper mid-west (United States Department of Education, 1986).

The variation of available figures appears to correspond rather well to estimated differences in family educational levels in the institutions and regions involved, and the preponderance of family background influences has not escaped dropout researchers. For instance, only 55 percent of adults in Mississippi had completed high school while 73 percent of Minnesotans had such credentials according to the 1980 Census. Recent reported high school completion rates for these two states approximate 60 and 90 percent respectively. Similarly, reported attrition rates across the more than 50 high schools in Los Angeles are highly correlated with the socioeconomic status of their pupil families (Los Angeles Unified School District, 1985). In the terms of our model, adult cultures lacking high school credentials seem to inspire less aggregate commitment to educational attainment in their offspring.

Research on dropouts has pushed against some natural limitations. We have already suggested that institutional data reporting is sporadic and inconsistent. It also tends to be very thin. School systems which do report on dropouts seldom assemble information about the backgrounds or experiences of students prior to dropping out. Even fewer follow dropouts after they leave school to assess their subsequent experiences. This means

that researchers do not have much regular institutional data to fuel secondary analyses.

Original data collection on dropouts, at least in sample sizes which promise generalizability, is beyond the means of most individual researchers. When pupils are in school, they can be surveyed efficiently. Once they leave, researchers are no more able to decide that they are dropouts than the districts themselves, and the necessary tracking and follow-ups can be prohibitively expensive.

A sizeable core of dropout research is based on a handful of national longitudinal surveys, surveys large enough to detect dropping out along with other behaviors of interest to their designers. Large scale national surveys probing transitions from youth to adulthood are most frequently enlisted. The principal data collection efforts include Project Talent, 1960 to 1964, the Youth in Transition Survey, 1965 to 1970, the Survey of Youth and Labor Market Experience (YLME), 1979 continuing, and the High School and Beyond Survey (HS&B), 1980 and continuing. (The major studies describing these surveys and employing them to study dropouts are cited along with their findings below.) Of course, in addition to those employing data from these surveys, many of the studies we report are based on original (and smaller) data collection efforts.

The four national longitudinal surveys are at once a rich source of information of interest to dropout researchers and at the same time have contributed less than we would like toward developing process models of dropping out. In their favor, they

include enough subjects in their samples to capture representative distributions of social and ethnic backgrounds, measureable grade performance, and in school and out of school activities. As a result, we have a wealth of descriptors of who drops out and what they were recently up to. The High School and Beyond Survey even performed an extensive follow-up, including surveying and retesting, of half of the 3000 or so 1980 sophomores who dropped out prior to the second wave of data collection in 1982. And the Youth and Labor Market Experience survey provided an immediate cross section of American 18 to 21 year olds, some of whom had never finished high school. Thus the early consequences of dropping out are investigated in data from these two surveys.

A distinct limitation for researchers interested in the cumulative processes of school achievement and commitment is that these surveys generally began in the early high school years of their subjects -- the ninth grade for Project Talent, the eighth grade for YLME, and the tenth grade for HS&B and Youth in Transition. None followed the students through critical earlier years of development and school interactions. Various data for these early years were sometimes generated from school records and self reports. Subject to the inherent limitations of these sources, such as the narrow slice of life captured in formal school records and potential inaccuracies in human reporting of past events, information suggesting processes important to our model emerge from this literature.

Attaching Research on Dropping Out to the Model

Pupil Family Background. We have already suggested an overwhelming finding of dropout research, the association of family background with eventual dropping out. Reporting on Project Talent, Combs and Cooley (1968) found that more than half of both male and female dropouts ranked in the lowest socioeconomic quartile. In this survey fewer than a fourth of male dropouts and a fifth of female dropouts hailed from the upper half of the SES distribution. Working with Youth in Transition data, Bachman, Green, and Wirtanen (1971) observed that about 60 percent of dropouts came from families in the lowest two of six measured socioeconomic levels. Dropout rates between the sophomore and senior years in the recent High School and Beyond survey were more than 25 percent for low SES youngsters, about 13 percent for those in the middle, and less than 8 percent for high SES subjects (Eckstrom, Goertz, Pollack, & Rock, 1986).

The association of family background with educational attainment generally is well known (Sewell & Hauser, 1975), and that this is mirrored in dropping out surprises no one. The processes through which these connections operate are less well understood, but certain possibilities are suggested by research. Cook and Alexander (1980) determined that SES is the single strongest predictor of educational attainment among measures available in the early years of school, but then academic performance becomes a better predictor at higher grade levels. We also know that family background predicts educational

achievement. This points to a process in which family background influences school performance positively (but not perfectly); school performance in turn contributes substantially to decisions to stay in school. This path is accommodated in our model.

Additional process-related influences of family background and home environment are supported in research on dropouts. Rumberger (1983) found that the presence of books and educational materials in the home is positively associated with school completion even when family earnings and ethnicity are controlled. Rumberger also found that the education level of the like-sexed parent was tied to school completion, suggesting that children look selectively within their families for educational role models. Ekstrom et al. (1986) report that dropouts in the High School and Beyond sample claim to spend less time at home discussing their experiences with their parents and that parents of dropouts spend less time monitoring their children's activities both in and out of school. These studies also suggest that independent of social class, coming from a one-parent household is associated with premature school leaving, and that kids from large families drop out more often. Such findings suggest that the intensity of family interest and involvement in schooling is important for school achievement, commitment, and completion.

Findings regarding the independent influence of race and ethnic background on dropping out are mixed. We know that blacks and Hispanics drop out more frequently than white youngsters. High School and Beyond data show Hispanic dropout rates exceeding

25 percent (for the two year period between 1980 and 1982), black rates of nearly 20 percent, and white dropout rates of about 14 percent. Steinberg, Blinde, & Chan (1984) report not-completed and not-in-school fractions of 14 to 24 year olds based on a recent Census Bureau survey. Eleven percent in the entire sample, 18 percent of those with a non-English speaking background, and 40 percent of those whose dominant language was not English dropped out. Non-English speaking dominance was a substantial independent predictor of dropping out in this study. In contrast, Rumberger found that dropping out in the YLME sample was not influenced by race or Hispanic background once social class was controlled. (Finer distinctions of language dominance were not included as predictor variables by Rumberger.) An obvious suggestion in terms of our model is that children who have difficulty speaking English are less likely to achieve either academic or social integration in school.

Academic Ability. Measures of academic ability and its connection with dropping out are included in many studies, with predictable results. The most recent High School and Beyond data reported by Eckstrom et al. (1986) show a negative relationship between sophomore ability (crudely indicated by scores on a vocabulary test) and dropping out. (They also report that the effect of ability on high school grades is about twice as strong as its effect on leaving school without graduating.) Earlier analysis of the High School and Beyond data assessed ties between scores on the entire six test battery and dropping out. (See Heyns & Hilton (1982) for a description of the tests.) Twenty

five percent of those scoring in the lowest composite score quartile left school between their sophomore and senior years. Dropout rates improved to 15.3 percent, 8.6 percent, and 3.7 percent for students in successively higher test performance quartiles (National Center for Educational Statistics, 1985).

Project Talent findings regarding pupil ability and dropping out are also robust. Combs and Cooley (1968) found that 80 percent of male dropouts and 74 percent of female dropouts scored in the bottom fourth of all students on Project Talent's 19-test battery. These assessments covered such skills as reading comprehension, mathematical computation, abstract reasoning, mechanical reasoning, memory, and visualization (p. 355). For all 19 tests administered in the 9th grade, eventual dropouts scored significantly lower than a comparison group of students who finished school but did not go on to college. Steinberg, Blinde, and Chan (1984) report in their extensive review of the literature that scores on aptitude or I.Q. tests stand out across numerous studies as powerful predictors of school completion, independent of social class.

Academic Achievement. Our model shows grade performance and learning as indicators of academic integration. As we have said, strong relationships between grades earned in school and school completion are evident across reported research. One such pattern of interest in a longitudinal model is early academic performance. More than half of the eventual dropouts in the Youth in Transition Survey had been held back for one or more grades prior to grade 10 (Bachman et al., 1971). Only 24 percent

of the entire sample had encountered such detours. Early grade retention and absenteeism were also related to dropping out in studies by Howell and Frese (1982), and Stroup and Robbins (1972).

Grades earned in high school show robust connections to dropping out. About half of those reporting D averages in 9th grade in the Bachman study eventually dropped out compared to 2 percent of those reporting A averages. High School and Beyond sophomores show similar patterns: 2.9 percent, 8.1 percent, 18.5 percent, and 42.5 percent of sophomores reporting mostly A's, B's, C's, and D's respectively dropped out (National Center for Education Statistics, 1985). In terms of our model, we expect that those who do poorly in school have some reluctance to adopt its academic values as their own. Poor grades or low academic integration appear to be associated with low commitments to continue with or finish school.

Social Integration. Dissatisfaction, negative attitudes, and anti-social behavior are common among those who drop out. High School and Beyond provides by far the richest data on social aspects of student life, and analyses of HS&B data confirm what previous studies consistently find. Eckstrom et al. (1986) report dropouts to be absent and truant frequently; they are more likely to be involved in school disciplinary proceedings, to have been suspended or placed on probation, and to have had serious trouble with the law. They express less interest in school and low general satisfaction with how their education is going. Dropouts feel they are held in less esteem by others in the

school, and feel less positively about themselves. They also report that their friends are less participating, less interested, less successful, and less inclined toward college. Low participation in extracurricular activities is reported by those who eventually drop out.

Given what we have said about the measured aptitude of eventual dropouts for school work and their apparently low levels of success in their classes, it is not surprising that negative attitudes about the institution prevail. Reflected in our model, we suggest that low levels of social integration probably result from low levels of academic integration. This suspicion, difficult to test conclusively on the basis of existing data, is voiced by others involved in analyses of dropout issues (Wehlage & Rutter, 1986; Steinberg, et.al. 1984).

Commitments to Schooling. In one sense, goal commitments lurk as a latent variable in our model. Even without direct measurement, earlier commitments are implied by eventual behaviors. We propose that those who achieve effective academic and social integration in the school become committed to attaining more schooling, which means securing the diploma. Some limited direct measures of commitment to schooling -- expressions of educational aspirations -- have been incorporated into dropout analyses. Studies which include such measures agree that lower educational aspirations are associated with dropping out (Bachman et al., 1971; Rumberger, 1983; Eckstrom et al., 1986). The High School and Beyond survey even included a question asking sophomores their own estimates of the likelihood they would

finish school, and those who expressed any doubts were more likely to drop out (Wehlage & Rutter, 1986).

The Larger Social System: Out of School Activities. The model includes a feature of out of school activity for youth that dropout researchers have paid much attention to. Dropouts generally face (or hope to face) interactions with the world of work when they leave school and their experiences in the workplace while in school may influence their attitudes and decisions about staying enrolled. According to Eckstrom et al. (1986) more than 40 percent of High School and Beyond sophomores reported holding jobs outside of school, eventual dropouts and finishers alike. Dropouts reported having worked more hours and earning slightly more per hour than finishers. Two thirds of the dropouts reported finding their work more enjoyable than school, whereas just over half of the graduates reported this. Nearly a fourth of eventual dropouts indicated their jobs to be more important than school in comparison to a tenth of the graduates.

We have only weak evidence on any causal relationships between work outside of school and school continuation. As we discuss below, among self reported reasons for dropping out, having to work or simply choosing to work is not frequently offered as an explanation. Steinberg, Greenberger, Garduque, & McAuliffe (1982) present some evidence that when excessive amounts of time are spent working (beyond 15 hours per week), attendance, time spent doing homework, participation in extracurricular activities, and academic performance all suffer. Their data also indicate that the likelihood of working

extensively is greater for those whose academic performance was lower prior to securing employment. We thus identify an additional process or mechanism reinforcing low academic and social integration into the school which hinges on academic performance.

Self reports: Reasons expressed by students for dropping out. In addition to the characteristics, behaviors, and attitudes catalogued in survey research on dropouts, large numbers of dropouts in two of the national longitudinal surveys were asked to indicate the reasons why they dropped out. In the survey of Youth Labor Market Experience, all respondents aged 14 to 21 who were out of school and not in possession of a diploma were asked to indicate the primary reason why they left. A summary of these responses is shown in Table 1.

(Table 1 about here)

Sophomores who dropped out in the High School and Beyond sample were asked to respond to a similar set of possible reasons for dropping out. Here, subjects indicated all reasons that applied, and not just the primary reason. A summary of these responses is shown in Table 2.

(Table 2 about here)

Some overall patterns stand out in these data. School related reasons for dropping out are acknowledged by a substan-

tial number of youngsters. These echo many of the research findings described above. In the HS&B sample, "School was not for me" and "Had poor grades" were each cited by about one third of females and by about 46 percent and 38 percent of males respectively. As the primary cause for leaving, school related reasons occupy a similar position among YLME respondents -- 44 percent of males and 32 percent of females cite school related reasons, particularly dislike of school. A reason we have not mentioned yet appears in these self reports. Pregnancy or marriage plans influenced about one third of the females in both samples, with preganancy more frequently cited by minority females and marriage plans by white females. Economic reasons such as choosing to work rank lower than school related reasons except for Hispanic males. The difference for this latter group, according to YLME, is a comparatively high incidence of home responsibilities.

Academic difficulties and negative feelings about school are acknowledged directly by many respondents. We suggested earlier that some other behaviors of dropouts, such as choosing work, may be a response to various difficulties at school. Choosing early pregnancy or marriage (if choosing is the right word) may also be a negative response to what school offers some young women. The joint presence of adademic with other reasons for dropping out cannot be determined from YLME data, where only the single most important reason was selected by respondents. Analyses of HS&B data have not probed covariance patterns among the reasons for dropping out. But the higher incidence of school related reasons

overall in the HS&B responses, together with totals in excess of 100 percent, suggests that they accompany economic or family reasons for some respondents.

The Contribution of Schools to Dropping Out. Most of the influences on dropping out described above attach first to individuals -- their backgrounds, abilities, and attitudes. Concentrating on individual correlates of dropping out reinforces the idea that dropping out is a form of deviant behavior, and an implicit assumption in much reported analysis is that it is important to identify cultural, social, or cognitive attributes that separate deviants from non-deviants. An alternative conception is suggested in our model. This is that anyone might drop out of school, given the right circumstances. The most proximate and critical circumstances of dropping out are shown to be low academic and social integration. The development of these circumstances over the lives of children are of central interest to us.

Schools appear to vary in the degree to which they reinforce or ameliorate alienation among students who find themselves in academic or behavioral trouble. Wehlage and Rutter (1986) find in HS&B data that dropouts believe teachers lack interest in students, discipline systems are ineffective and unfair, and there is widespread truancy in their schools. Wehlage (1983; 1986) and others (e.g. Hamilton, 1986) report on particular programs where potential dropouts benefit from focused interventions that have a common core of ingredients designed to integrate students into an active and productive in-school life.

The attention to dropouts in some settings contrasts sharply to what Fine (1986) found to be total indifference of school officials to student dropout decisions in a New York City high school. Natriello, Pallas, and McDill (1986), summing up a body of work recently incorporated into a special issue of Teachers College Record (Spring, 1986) on school dropouts, also stress the critical nature of school responsiveness as a focal point for future research. Observations in the "effective schools" literature that some schools with pupils of low socioeconomic background manage to maintain successful and retentive learning environments also suggest dropout preventive possibilities in the actions of teachers and administrators (Bossert, 1985).

Implications for Studying Mandatory Graduation Tests.

We conclude here that although dropping out appears to have a web of antecedents, and although some of the reasons offered do not appear to be connected to the cognitive development of kids in school, academic integration appears to be a very central component of decisions to drop out. The most significant correlates of dropping out -- socioeconomic background, race and ethnicity, pupil ability, educational aspirations, early grades and grade retention, high school grades, and school disciplinary entanglements -- each either directly reflect or have known connections to academic success and integration. We also believe that dropping out does not usually strike without fairly clear warning signs, particularly an accumulation of academic and social difficulties in school. This perspective along with more specific observations recorded in this review have implications

for the study of minimum competency tests required for high school graduation. These implications are described here.

1. If dropping out is the result of a process extending over the many years of the in-school lives of youngsters, affixing a graduation test at the end of the experience may have very marginal effects. Many students lack much integration into the life of the school by the time they reach high school and more than one observer has suggested that, for this reason, dropout preventive measures would be much more effective if concentrated on early educational development. Large numbers leave school before their senior years, and dropping out occurs over all of the high school grades. Steinberg, Blinde, and Chan (1984) point out that some youngsters, particularly Hispanics, do not even show up for 9th grade. For many current students, a test that must be passed for graduation is clearly irrelevant -- they are gone long before the required test is a consideration.

2. The centrality of academic difficulties in processes of withdrawal from school suggests that graduation tests could play a pivotal role in dropout decisions for some students. Diploma denials are an obvious potential effect. Some who would have graduated in the absence of the test may not because they score below established cut-offs and fail consistently on repeated attempts to pass. Some who fail graduation tests may drop out in order to avoid the humiliation of additional failure should they try again.

3. The reputation gained by an implemented minimum competency

test may influence early school dropout decisions. A test may become known for its difficulty and for its likelihood of identifying large numbers of failures. For some students, this may add to a collection of influences suggesting that high school is not worth continuing. The institution of a minimum competency graduation test, along with other augmented standards for graduation, may signal students that the school now means business when it comes to academic learning (Jaeger, 1982). A strategy of getting by and exchanging forbearance from disruption for passing grades from their teachers (Sizer, 1984) may lose its appeal to youngsters. One alternative will be leaving school.

4. Some minimum competency tests have been criticized because they fail disproportionately high numbers of minority children (Linn, Madaus, & Pedulla, 1982). We note that dropout rates among blacks and Hispanics are disproportionately high wherever they are reported. If minimum competency tests have any influence on dropping out, this influence may be insidious in its selective impact on minority youngsters. Not only may fewer graduate because of insufficient test scores, the reputation of a graduation test as unfair to minorities may be further cause for minority kids to simply give up prior to taking it.

5. The responsiveness of schools to youngsters who are at risk of failing graduation tests or who have already failed them could be a focal point of research on ties between MCT's and dropping out. We noted that some schools appear to act

remorselessly to push certain students out, or at least quietly allow them to find the door. A graduation test could serve these ends most conveniently. Some schools may go to great lengths to encourage passage by marginal youngsters; some may tacitly or actively discourage success. What counselors, principals, and teachers transmit to students about the importance and meaning of the tests and their interactions with kids who fail them may prove interesting and important in future research.

6. Research on the impact of minimum competency tests will confront problems in the widespread unavailability, spotty nature, and incomparability of institutioinal record keeping on dropouts. We do not anticipate observing nationwide swings of reported dropout rates over the near term because of minimum competency testing or other instituted standards. Reported dropout rates are subject to many influences which could operate over this time, including incentives for institutions or systems to report them with particular biases for particular audiences.

7. In addition to inconsistent dropout data reporting, the varying forms of competency testing across states and school systems imply that this research is misconceived if it hopes to identify pervasive effects on dropping out of competency testing per se. We should instead explore specific models of graduation testing to find out more about how they work and how each may influence school continuation decisions. We hope to select cases where good dropout data and relevant

information about tests and testing systems can be obtained, and where good data on graduation test performance and re-test behavior (e.g. showing up or not) can be found. We plan to expore these cases by surveying and interviewing school counselors, teachers, or principals about the effects of their testing programs, and by surveying students about their attitudes and beliefs regarding their anticipated exit tests.

8. A clear next step in the development of this research is an up to date review of what is known about minimum competency tests for graduation across the states. We are in the process of assembling the literature and communicating with researchers and institutional officials with known interests in this topic. A second background paper for this study will describe the results of these activities.

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FIGURE I

A PROCESS MODEL OF DROPPING OUT OF SCHOOL

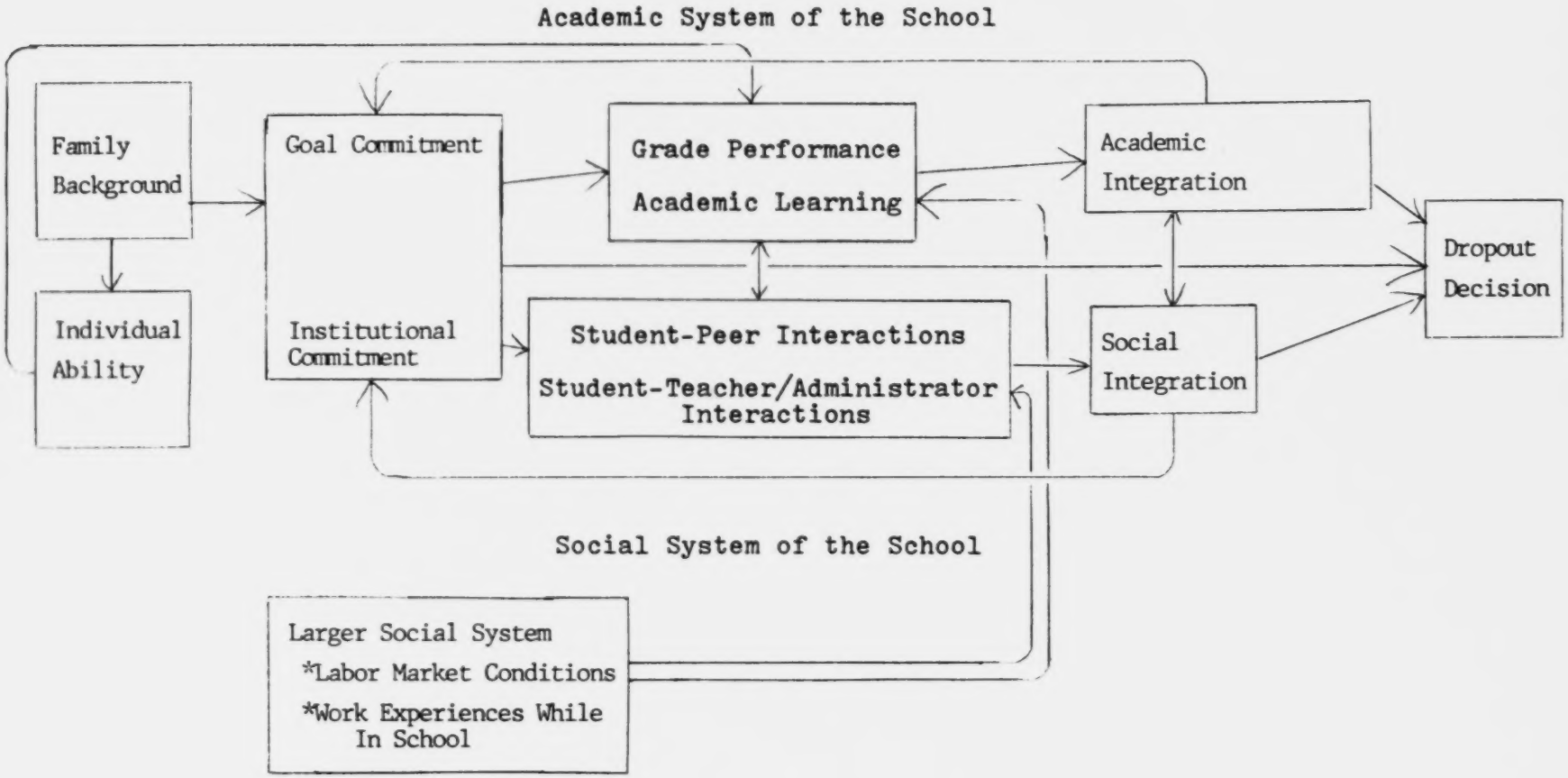

TABLE 1

Percentage of 1980 sophomore dropouts from public and private schools reporting each of the reasons for leaving school before graduation, by sex and race/ethnicity.

	Male		Female	
Reasons	Minority	Other	Minority	Other
School-related				
1. Expelled or suspended	14.3	12.3	3.2	6.3
2. Had poor grades	31.2	38.4	30.0	30.0
3. School was not for me	14.8	45.6	24.9	34.1
4. School ground too dangerous	2.2	2.9	3.1	1.1
5. Didn't get into desired program	12.8	4.7	5.0	4.2
6. Couldn't get along with teachers	22.0	19.8	8.1	10.2
Family-related				
1. Married or planned to get married	5.5	7.6	19.2	36.4
2. Was pregnant	N/A	N/A	29.2	20.5
3. Had to support family	21.5	9.3	10.6	7.1
Peer-related				
1. Friends were dropping out	6.0	6.7	1.7	2.7
2. Couldn't get along with students	6.6	4.7	5.7	6.0
Health-related				
1. Illness or disability	4.7	4.6	9.0	5.3
Other				
1. Offered job and chose to work	24.1	28.4	12.8	9.7
2. Wanted to enter military	8.3	6.7	1.1	.6
3. Moved too far from school	2.2	2.2	5.5	5.2
4. Wanted to travel	6.5	7.3	2.4	8.5
Sample size	537	648	486	615

Notes:
1. Students might report more than one reason.
2. Minority group includes Hispanics, blacks, and American Indians and Alaskan Natives. Whites and Asian Americans were grouped together because they provided similar reasons for dropping out.
3. The standard error of the difference between two percentages (d) can be approximated by taking the square root of the sum of the standard errors for p_1 and p_2. That is s.e (d) = [s.e. $(p_1)2$ + s.e. $(p_2)2]^{\frac{1}{2}}$ where s.e. (p) = $D[p(100-p)/n]^{\frac{1}{2}}$. n is the sample size and D is a correction factor estimated to be 1.6. The above approximation generally is conservative.
4. All percentages are based on weighted computations.

Source: Peng, Takai, and Fetters (1983).

TABLE 2

Primary Reason High School Dropouts, 14 to 21 Years Old, Left School, by Race and Sex

Reason for Leaving School	Female				Male				Total
	Black	Hispanic	White	Total	Black	Hispanic	White	Total	
School Related	29	21	36	32	56	36	55	53	44
Poor performance	5	4	5	5	9	4	9	9	7
Disliked school	18	15	27	24	29	26	36	33	29
Expelled or suspended	5	1	2	2	18	6	9	10	7
School too dangerous	1	1	2	1	0	0	1	1	1
Economic	15	24	14	15	23	38	22	24	20
Desired to work	4	7	5	5	12	16	15	14	10
Financial difficulties	3	9	3	4	7	9	3	5	4
Home responsibilities	8	8	6	6	4	13	4	5	6
Personal	45	30	31	33	0	3	3	2	17
Pregnancy	41	15	14	19	0	0	0	0	9
Marriage	4	15	17	14	0	3	3	2	8
Other	11	25	19	20	21	23	20	21	19
Total Percent	100	100	100	100	100	100	100	100	100

Note. Source: National Longitudinal Survey of Youth Labor Market Experience. Distributions are percentage.